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ABSTRACT

Results of a self-study conducted by Rice University, Texas, on the impact of federal legislation, especially nondiscrimination legislation, and the influence of federally-sponsored research are described. A survey was conducted of department chairmen, administrative staff, and a few selected faculty through interviewing and questionnaire administration. Among the legislation that has had the greatest impact on the university are the Civil Rights Act of 1964 and the required compliance with Executive Order 11246, Title IX, and the Rehabilitation Act of 1973. Title IX has changed the university's policy and practices relating to athletics and particularly the intercollegiate athletic program. Action has been taken to make the university accessible to the handicapped, but structural modifications of all existing facilities would impose a significant financial burden. Some major changes have occurred which have affected the university's traditional hiring philosophy and practices, administrative procedures, and finances. Equal Educational Opportunity legislation and affirmative action regulations were cited as the federal legislation that had the greatest impact on the university in the last decade. The Occupational Safety and Health Act and the Buckley Amendment have also affected the university. The federal government has been the principal sponsor of research. Problems created by changes in government funding priorities and problems encountered in reporting and documentation required for federal grants and contracts are reviewed. (SW)

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A SELF-STUDY ON THE IMPACT OF THE FEDERAL GOVERNMENT ON RICE UNIVERSITY

Submitted to the
Sloan Commission on Government and Higher Education

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October 7, 1977

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Office of External Affairs
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INTRODUCTION

In a speech before the 1977 Council for the Advancement and support of Education Annual Assembly held in San Francisco on July 13, 1977, Derek Bok, president of Harvard University, noted the dramatic increase during the last two decades in the policymaking and financial role of the federal government on higher education. One obvious demonstration of this change is illustrated by the growth in federal aid to universities--in 1950 it was roughly $500 million while in 1975 it had grown to about $7 billion. This same period of time, especially the last ten years, has also seen the promulgation of regulations affecting higher education increased to an alarming proportion.

Most government regulations are designed to serve a worthy purpose, such as the Rehabilitation Act or the affirmative action program, but problems generally arise from how these regulations are interpreted and administered. Some government intervention is probably needed, but it is a matter of level and degree. A suitable level needs to be reached so that it would push and aim people in the right direction, but in order to be totally effective it must not be so overbearing as to stop everything. A major task now facing educational institutions and the federal government is the need to establish the proper balance between appropriate federal regulations and reasonable accountability requirements while maintaining the institution's self-determination.

At the invitation of the Alfred P. Sloan Foundation, Rice University agreed to participate in a study on the impact the federal government has had on this University. Government funds , legislation and regulations affect a wide range of university activities, and this self-study focuses on two areas at Rice: (1) the impact of direct legislation, especially nondiscrimination legislation, and (2) the influence of federally sponsored research. The following report presents a summary of these findings.

I. METHOD OF STUDY

This study was conducted by two staff members in the Office of External Affairs. The methods used to acquire the information desired were structured to take the greatest advantage of the limited amount of time assigned for this survey. All of the results were gathered over a four-month period from June to September 1977.

The approach consisted of: (1) conducting personal interviews, and (2) distributing questionnaires. The interviewing process was the initial step so that a more complete overview of the material and questions which needed to be asked in the questionnaires could be obtained. It was also felt that if the communication process was begun in person more candid and complete responses would be elicited.

Rice has a relatively small faculty and staff, therefore there were few problems in identifying the appropriate individuals and areas to include in this study. Thirty department chairmen, 12 members of the administration, 18 administrative offices, a few selected faculty and staff members directly involved with federal regulations were contacted.

Twenty of the department chairmen were interviewed; ten were unavailable because of summer travel and commitments off-campus. Nine of the administrative officers and 22 administrative and managerial members of the staff were interviewed. The interviews lasted between 30 and 60 minutes. Although no specific format was used, several basic questions

were always asked:

> Which federal regulations directly affect you or your department?
>
> Which regulations have had the greatest impact on your department or the University?
>
> How would you evaluate this impact (positive and negative effects)?
>
> What direct and indirect changes have occurred as a result of these regulations?
>
> Does your department receive any federal funds?

The questionnaires consisted of general questions which applied to the entire span of federal interaction, as well as requests for specific information regarding a particular area of federal involvement. A separate questionnaire on research funding was distributed to all department chairmen, the Office of Advanced Studies and Research, and selected principal investigators. A questionnaire concerned only with affirmative action was also sent to all department chairmen, administrative officers and staff directly involved in compliance with the affirmative action program. A complete set of the questionnaires is included in the Appendix.

Seventy-three percent of the questionnaires were returned. Eighteen individuals did not return the forms; however, all but four of the 18 people who did not respond were interviewed, for a total survey response of 94 percent.

II. RICE UNIVERSITY

Rice University is a private, independent, nonsectarian, coeducational institution. The University includes within its curricula undergraduate and graduate programs in six academic units: School of Architecture, Division of Humanities and Social Sciences, School of Natural Sciences, the George R. Brown School of Engineering, the Shepherd School of Music, and the Jesse H. Jones Graduate School of Administration.

Rice was founded as the William Marsh Rice Institute in 1891 and so ranks as one of the younger schools among the nations' major institutions. Students are drawn from all fifty states though Texans predominate (1,585 out of 2,667 undergraduates in 1976 were from Texas). With an overall student body of 3,500 Rice has approximately 2,700 undergraduates and 800 graduate students. Among the undergraduates the ratio of men to women is 2.56 to 1.

Rice has, since its opening, purposefully maintained a relatively small enrollment, believing that this fosters the community spirit most in keeping with the tenets of good education. Decisions regarding admission to Rice are traditionally based on personal and scholastic records, competitive examinations, recommendations, and applicant interviews. Over 60 percent of the 1977 freshman class ranked in the top five percent of their high school class, 106 were valedictorians, and 5 were Presidential Scholars. This year's entering class has 147 National Merit Scholars, and seven

National Achievement Scholars. Rice's total enrollment continues to include the highest proportion of National Merit Scholars of any school in the nation.

Tuition for 1977-78 is $2,500 and room and board in one of the residential colleges is $1,950. Some 60 percent of Rice's students receive financial assistance in the form of scholarships, work grants, and other aid. In 1976, student aid totalled $3,679,421 and $440,201 of this was funded by government financial assistance:

BEOG	179,835
SEOG	36,037
Work-Study	116,699
NDSL	107,630
	440,201

The majority of Rice's 2,700 undergraduates live on campus in eight residential colleges, patterned largely after those of Oxford and Cambridge, each with its own government and judicial system. Each of the colleges has about 220 resident members, 100 off-campus, several faculty and community associates, resident associates (faculty members who live in the college alongside the students), and the college master, who with his family, lives in a house adjoining the college proper.

The Rice faculty totals 328 full-time members and 75 part-time members, with 81 percent holding the doctor's degree. Eight of Rice's faculty are members of the National Academy of Sciences, and one is a member of the National Academy of Engineering. The low faculty/student ratio of

10 to 1 makes possible small classes in most subjects.

The Bachelor of Arts degree at Rice is awarded with a designated major in some field of architecture, the humanities, social sciences, natural sciences, or engineering. A Bachelor of Music degree is offered by the Shepherd School of Music in conjunction with the Master of Music degree program. The George R. Brown School of Engineering offers a Bachelor of Science degree, which like the B.A., normally requires four years of study. State certification for secondary teaching is offered in conjunction with the B.A. and programs that satisfy requirements for admission to law, medical and dental schools are offered in twenty-eight academic disciplines.

The University's Fondren Library has holdings of 920,000 volumes, 940,000 microforms and 8,100 current periodicals and is a member of the Association for Research Libraries.

Rice participates in intercollegiate athletics and is a member of the National Collegiate Athletic Association (NCAA), Southwest Athletic Conference (SWC), and the National Association for Intercollegiate Athletics for Women (MAIAW), and its Texas affiliate (TAIAW).

The 300-acre Rice campus is located three miles from downtown Houston, and the physical plant consists of forty buildings, including the eight residential colleges and the largest stadium in Houston. The total plant is valued at $77,663,195.

A nineteen-member Board of Governors composed of seven trustees, eight term-governors, and four alumni-governors

(elected by the alumni at large) directs University operations. The president acts as the University's chief executive officer, and top administrative responsibilities are divided between two vice presidents. Each school and division is administered by a dean, as are special affairs such as undergraduate studies, and advanced studies and research.

For the fiscal year ending June 30, 1976 the market value of the endowment of Rice University was $215,-14,698 reflecting a 16.8 percent increase since 1972 (see Exhibit 1). Of 21 privately endowed universities with endowments of $100 million or more, Rice ranked number eleven in size of endowment as of June 30, 1976. In this same year, Rice had a budget of $35,629,109 and revenues during this period totaled $37,443,265 (see Exhibit 2).

EXHIBIT 1

FOUR-YEAR UNIVERSITY ENDOWMENT

GROWTH FOR PRIVATE UNIVERSITIES

WITH OVER $100 MILLION ENDOWMENT

SCHOOL	ENDOWMENT 6/30/76	ENDOWMENT 6/30/72	4-YEAR % CHANGE
1. Harvard	1,427,926,795	1,187,355,679	+20.3
2. Yale	567,595,622	595,200,000	- 4.5
3. Stanford	440,748,115	345,942,000	+27.4
4. Princeton	425,880,408	442,452,402	- 3.6
5. M.I.T.	425,546,000	443,823,000	- 4.1
6. Rochester	342,523,655	527,267,076	-35.0
7. Cornell	303,582,307	297,956,898	+ 2.0
8. Columbia	283,919,469	286,335,216	- 0.7
9. Chicago	268,863,941	364,055,042	-26.1
10. Northwestern	262,946,175	295,696,321	-11.1
11. Rice	215,214,698	184,396,191	+16.8
12. Washington Un.	176,143,205	163,206,712	+ 8.0
13. Johns Hopkins	169,914,860	180,380,455	- 5.6
14. Un. of Pennsylvania	163,851,217	154,000,000	+ 6.5
15. Dartmouth	163,718,129	172,621,542	- 5.2
16. Cal. Tech	158,031,000	136,135,000	+16.1
17. Vanderbilt	148,549,001	164,700,000	- 9.7
18. NYU	126,754,000	108,771,636	+16.5
19. Duke	116,537,226	128,200,542	- 8.6
20. Carnegie-Mellon	110,488,584	128,079,520	-14.1
21. Brown	97,703,000	117,485,850	-16.2

REVENUES AND EXPENDITURES

	Year Ended June 30, 1976			
	Unrestricted	Restricted	Total	Year Ended June 30, 19[illegible] Total
Revenues:				
Educational and general —				
Student tuition and fees	$ 7,605,311	$ 223,767	$ 7,829,078	$ 7,[illegible]
Government grants and contracts	1,298,519	4,454,716	5,753,235	5,777,056
Gifts and private grants (Note 5)	1,256,194	2,522,294	3,778,488	3,084,833
Endowment income (Note 2)	11,831,061	2,048,842	13,879,903	13,353,927
Sales and services of educational and service departments	61,343	960,628	1,021,971	803,163
Other sources	13,622	39,129	52,751	78,212
Total educational and general	22,066,050	10,249,376	32,315,426	30,113,087
Auxiliary enterprises	5,058,624	69,215	5,127,839	4,679,759
Total revenues	27,124,674	10,318,591	37,443,265	34,792,846
Expenditures and Mandatory Transfers:				
Educational and general —				
Instruction and departmental research	7,967,263	3,255,046	11,222,309	10,136,486
Sponsored research	—	4,708,050	4,708,050	4,712,777
Other sponsored programs	—	1,215,367	1,215,367	1,297,680
Library	1,551,279	133,997	1,685,276	1,533,915
Student services	777,529	80,861	858,390	728,281
Operation and maintenance of plant	2,387,981	270,917	2,658,898	1,847,430
General administration	2,228,700	32,259	2,260,959	2,339,740
General institutional	977,361	11,582	988,943	710,940
Student aid	3,193,254	486,167	3,679,421	3,500,539
Educational and general expenditures	19,083,367	10,194,246	29,277,613	26,857,788
Mandatory transfers for —				
Provision for plant improvements (Note 8)	1,183,106	—	1,183,106	1,135,418
Loan fund matching grant	—	5,601	5,601	10,410
Total educational and general	20,266,473	10,199,847	30,466,320	28,003,616
Auxiliary enterprises	5,038,444	124,345	5,162,789	4,826,430
Total expenditures and mandatory transfers	25,304,917	10,324,192	35,629,109	32,830,046
Other Transfers and Additions (Deductions):				
Excess of restricted receipts over transfers to revenues	—	1,964,703	1,964,703	2,321
Refunded to grantors	—	(25,928)	(25,928)	(29,310)
Funding of current unrestricted expenditures for equipment (Note 8)	875,670	—	875,670	729,163
Unrestricted gifts and investment income allocated	(935,474)	—	(935,474)	(108,145)
Provision for contingencies (Note 8)	(591,553)	—	(591,553)	(567,709)
Other voluntary transfers, net	(282,270)	(984,712)	(1,266,982)	198,244
Net increase in fund balances	$ 886,130	$ 948,462	$ 1,834,592	$ 2,207,364

See notes to financial statements.

III. DIRECT REGULATION OF UNIVERSITY ACTIVITIES

The greatest impact of direct federal regulation through legislation on this institution during the last decade has been in the area of nondiscrimination requirements--especially the Civil Rights Act of 1964 as amended and the required compliance with Executive Order 11246 as amended. Although in philosophical agreement with the goals of such legislation, the compliance and reporting requirements has in many instances reached unreasonable limits. The impact of Equal Employment Opportunity and affirmative action regulations on Rice University activities will be discussed later in this section.

Title IX and the Rehabilitation Ace of 1973 are two other examples of nondiscrimination legislation whose implementation has affected the University, but the ultimate impact of these regulations is still uncertain at this time.

Title IX prohibits discrimination on the basis of sex in education programs and activities receiving federal financial assistance. This accelerated the University's efforts in this area but it was consistent with its approach--for instance, prior to its passage efforts were already underway by Rice to recruit qualified female students in science and engineering.

Title IX has changed the University's policy and practices relating to athletics and particularly the intercollegiate athletic program. To accommodate the women's athletic program, Rice spent approximately $60,000 in 1976-77 for coaching salaries, equipment and travel for women's teams.

This year, a Director of Women's Athletics and four new permanent coaches for women's sports have added to the athletic staff, and presently an extensive renovation within existing facilities is underway to provide dressing rooms for women's teams.

The University agrees with the intent of Title IX, but it has been a financial strain for it to establish, in a short time, a women's program which provides the same opportunities available to men.

Confusion and lack of understanding as a result of vague and indefinite guidelines has made compliance with the Act difficult and full implementation may take years to accomplish.

Rehabilitation Act of 1973

The Rehabilitation Act of 1973 marked the culmination of a major effort by Congress to create a "barrier free environment" for all handicapped persons, and specific guidelines for higher education were formulated over the next few years.

In anticipation of the requirements of this legislation, Rice initiated compliance procedures in 1975 and to date has allocated approximately $45,000 for the construction of ramps and other physical renovations to make the campus more accessible to the handicapped. Because of its small size, Rice has been able to provide services for its few handicapped students on an individual basis.

The University's major concern now is the uncertainty regarding the extent to which compliance will be required.

For example, structural modifications of all existing facilities would impose a significant financial burden. At this point careful consideration and interpretation of the regulations will be required so that overcompliance does not result in costly and unnecessary modifications.

EEO and Affirmative Action

The data, comments and quotations found in this section of the report have been taken from personal interviews as well as questionnaires distributed to department chairmen, administrative officials and staff of Rice (see Appendix). In addition to the general questionnaires sent to this group, a special form on the affirmative action program was also distributed to all department chairmen and members of the administration and staff who come into direct contact with this program. Seventy-five percent of the affirmative action forms were returned, and of the remaining 25 percent (nine people), all but four were interviewed, providing a broad view of Rice's involvement with EEO and Affirmative Action.

In the short time that Rice University has been involved with EEO and affirmative action, some major changes have occurred which have affected the University's traditional hiring philosophy and practices, administrative procedures and finances. Rice's attitude from the beginning has been to make an effort to fully comply with the regulations stemming from these two programs. This report will review these efforts and the resulting changes in procedures.

The Equal Employment Opportunity Act, Executive Order

11246 and the increased emphasis on affirmative action led to Rice's development of its first Affirmative Action Program in 1972. A letter from the Regional Office of Civil Rights HEW, dated April 20, 1973, requested a revision of Rice's Affirmative Action Plan. Our response committed Rice University to a revision plan by September 30, 1973. A verbal agreement extended this deadline to October 29.

At the end of a sex discrimination investigation conducted by OCR at Rice during the week of October 29-November 2, 1973, the visiting compliance review persons told University officials that the University was in technical non-compliance because the revised affirmative action plan was not acceptable.

Nothing further was heard until late November when a faculty member was denied a request for grant-supported travel, based on the University's non-compliance. A subsequent letter from the Dallas Regional Office dated November 21, 1973 stated:

> "In the judgment of this office, Rice University will not be in compliance with Executive Order 11246 until the aforementioned revisions are made in the institutions's affirmative action plan. The status of technical non-compliance prohibits granting future federal contracts.
>
> "Future investigation of the sex discrimination complaint against Rice University will await receipt and evaluation of the University's affirmative action plan..."

After a meeting with personnel of the Regional Office and

agreement on a time schedule for a revised affirmative action plan, the University received a letter dated December 5, 1973 from the Branch Chief, Higher Education, OCR, HEW, saying that there would be no further delay of Rice University's receipt of federal contracts because of compliance status.

It should be noted that at no time did Rice receive a show-cause notice from the OCR as described on page I-9 of Executive Order 11246, nor was the University afforded an opportunity of a hearing as described on page I-10. The revised plan was delivered to HEW but as yet Rice has not received official acceptance of this plan.

Almost without exception, all those responding to the question "what federal legislation has had the greatest impact on Rice University in the last decade" cited EEO legislation and affirmative action regulations. While there was no agreement on whether this impact has been positive or negative, several effects are readily apparent in the changes in hiring procedures and practices. The greatest contrast between affirmative action and previous hiring practices involve academic appointments where the process has been altered considerably because of the required advertising of all positions. This "open advertising" process conflicts with the method which has traditionally dominated faculty hiring procedures. That is, the practice of soliciting names of candidates and evaluations of their abilities from individuals or departments at other institutions with expertise in the discipline or field in which the vacancy exists.

The EEO and Affirmative Action guidelines, however, now mak it possible for applicants outside the "referral system" to be considered for positions, and has widened the scope of candidates.

Although these advertisement notices have brought applications to Rice that previously would not have been received, there has been no substantial increase in applications from minorities and females. Of the 1,357 professional faculty applications received by Rice between March 1, 1976 and February 28, 1977, only nine were from minorities. Most of the respondents felt that at Rice the recent compliance efforts have only led to an influx of applications from unqualified applicants resulting in excessive and time-consuming paperwork. Even so, they felt that these procedures should remain in effect.

"...it is all very time consuming but we end up doing a better job of hiring since we are forced to define words such as best, quality and qualified..."

"...it has rationalized recruiting and promotion procedures but it has also made them much more rigid and time consuming."

"...precautionary measures to insure that injustices do not take place are desirable and necessary..."

Faculty offered several explanations regarding the lack of minority and female applicants. Most of the department chairmen stated that there is such a small supply of qualified females and members of minority groups who hold Ph.D. degrees that it is virtually impossible to successfully recruit

those who are available, even when extraordinary efforts are made beyond those required. In many instances, a "bidding war" results between schools in order to attract the few qualified candidates, and the situation is especially difficult in the sciences and engineering. Several department chairmen indicated that Rice is unable to match the salaries offered by some academic institutions--for example, a starting salary at most colleges for an assistant professor is in the $12,000-$15,000 range, yet females and minorities are being offered salaries as high as $25,000. Rice does not feel that it is in a position to make such offers, nor does it feel that they are justified.

> "Unfortunately, I have not been able to hire any of the minority candidates because Harvard has also been able to identify them and has been able to offer a premimum salary."

Competition from industry was also given as a factor since corporations are intensively recruiting minorities and females and offer excellent salaries and benefits.

Although the implementation of an affirmative action plan at Rice has resulted in the development of standardized procedures in advertising positions and evaluating candidates with a notable increase in numbers of applicants, little actual change can be seen in faculty hiring. During the period 1970 to 1976, the percentage of minorities on the professional and research staff dropped 5.3 percent to 4.4 percent, and the percentage of females rose from 13 percent to 13.5 percent. It should be noted that the size of the

faculty during this same period remained essentially the same with little growth in "new faculty positions". While little change occurred in faculty appointments, the number of females and minorities at the staff level has increased. Minorities in office and clerical positions rose from 8.9 percent in 1970 to 19.4 percent in 1976. The percent of females in managerial positions was 22.2 percent in 1970 while in 1976 it had increased to 34 percent.

Many of those questioned felt that the government's policies are inconsistent since they emphasize the hiring of more members of minority groups and females and establish goals in this area without regard to availability. Several suggested that the federal government should consider directing more of its efforts toward providing additional funds and programs to encourage and support minority graduate students so that greater numbers of them could obtain advanced degrees in their chosen field.

One of the major effects of EEO and the affirmative action program has been the development of an attitude and philosophy among Rice academicians toward the implementation of these regulations. While they feel that the goals of the legislated programs are desirable, they also feel that they were written for industrial application with little attempt by the regulating agencies to adapt these to the special circumstances of higher education. Further they feel that the personnel writing and enforcing these regulations have little, if any, interest in or comprehension of the manner in which an academic institution functions.

"Many government personnel appear to have little background or experience in the fields for which they write regulations."

"Some regulations make one wonder whether the personnel promulgating those regulations are fully conversant with the problems created by such regulations."

"The regulations are poorly written, concentrating on detail and procedures whereas the overall problem remains unresolved. By inference, the personnel must be unqualified and inexperienced in the real world situations that occur."

Department chairmen also complained about the lack of flexibility of the guidelines. For instance, even though there may be only one or two people qualified for a faculty or professional research position, such as a highly specialized technician, the entire recruiting process must be followed resulting many times in lengthy delays and substantial time spent on these procedures.

"Faculty positions to be filled must be widely advertised even though they may be so specialized that only one or two intermediaries can be effective in informing various candidates of openings. Notification of 75 percent of organizations is pro forma because they always fail to produce applicants."

Department chairmen, deans and others involved in hiring decisions agreed that the administrative centralization of compliance procedures through the affirmative action office and the business office has helped to alleviate some of the special problems encountered in filling a position.

At the same time, though, there is an obviously critical attitude among faculty and administrators of the management

of the University's compliance process. Most of this can be attributed, however, to communication problems created by inconcise, poorly written and sometimes contradictory regulations. Requirements outlined in the regulations are not clearly defined and often do not suggest format or guidelines. In addition, because enforcement of equal opportunity and affirmative action is the responsibility of many government agencies, costly and time-consuming reporting procedures required by multiple agencies result which distract from dealing with affirmative action problems on the campus.

Rice spent $55,000 establishing EEO and affirmative action compliance procedures and reporting methods. This included the cost of establishing the Affirmative Action Office, which required additional staff, equipment and computer programming. In 1976-77 the cost of maintaining these procedures including individual departmental costs was $80,000, which does not include legal fees and payments resulting from complaints and legal suits alleging certain violations. In the past two years Rice has spent approximately $13,000 on legal costs.

Employment and recruiting procedures have changed considearbly at Rice as a result of government involvement and much has been accomplished in the area of equal opportunity which otherwise might not have occurred, or at least would not have occurred as rapidly. Another important benefit of this federal legislation has been the centralization of administrative procedures at Rice resulting in a more organized and efficient method of employment. What is more

difficult to assess, though, is the impact of the loss of time, especially in the academic area due to overwhelming responses to advertised positions which divert a faculty member from his teaching and research responsibilities. Finally, although substantial effort and funds have been expended over the past six years in the attempt to attract minorities and females, the percentage of these on the Rice faculty has remained relatively unchanged.

OSHA

Legislation other than that involving civil rights which were regularly mentioned during the course of this study were OSHA and the Buckley Amendment.

The Occupational Safety and Health Act, OSHA, was designed to establish contruction requirements and safety standards to protect the health and safety of workers and was written specifically for industrial situations. This legislation, while not directly aimed at educational institutions, has had a considerable effect on them in terms of cost of compliance and changes in administrative procedures. The major criticism of those affected by this Act is that it is poorly written in vague and ambiguous terms making interpretation extremely difficult. The regulations seem more concerned with detail than with major discrepancies.

OSHA regulations in many instances interfere with University operations--such as safety regulations written for industrial laboratory situations but which greatly affect teaching laboratories. As a consequence, programs have to be readjusted and many times government attempts to

achieve these goals are often cumbersome, misdirected and ineffective. An example given by one respondent involved the stringent new guidelines which OSHA has recently released governing the use of a common laboratory solvent--benzene. It is generally agreed that benzene is a toxic material and special precautions should be used when handling this substance. However, the regulations are such that it now becomes essentially impossible to use it at all. Furthermore these regulations apply to industrial and private laboratories but state-run laboratories are exempt. "A sound principle (the need to control exposure to benzene) has led to a highly political, ineffective federal regulation."

In terms of cost of compliance with OSHA regulations, the position of University Safety Officer has been created. This individual spends 50 percent of his time overseeing the implementation of OSHA regulations and preparation of the required reports. It is estimated that the initial cost of compliance was $18,000 representing expenditures primarily for the construction of a special facility to house hazardous substances, and the installation of safety cabinets and containers in the laboratories. In 1976-77 it was estimated that OSHA compliance requirements cost the University approximately $15,000. Of real significance, however, is the potential of major, capital expenditures which could be required to meet OSHA standards. Many of these are unreasonable, particularly in an academic setting, and if stringently enforced could totally incapacitate the University. As an example of the magnitude of capital expenditures which

could be required, a renovation of the Rice Chemistry Building is currently underway costing in excess of $1.5 million. Much of this renovation is being done to ensure compliance with required safety measures such as proper ventilation and safety exits and while these modifications are needed and reasonable and would have been made irregardless of OSHA requirements, it is clear that such major safety expenditures which are not planned or desired could have a significant impact on the University's budget.

While the concept of OSHA safety standards is good, the absence of understanding of an educational environment, and the constantly changing and unclear regulations make it very difficult, and in some instances impossible, for an academic institution to comply with the required regulations.

Buckley Amendment

The Family Educational Rights and Privacy Act of 1974, the Buckley Amendment, has had an effect on the University's procedures involving student records and files. Initially the major problem was due to the inconsistency and vagueness of the regulation itself, making it impossible to determine whether or not the methods being implemented were those desired. After considerable clarification, the Buckley Amendment became comprehensible and University policy was extablished in order to fully comply with the Act and with all regulations from HEW as they may apply.

Certainly the Buckley Amendment is consistent with Rice University's policy of dealing with students--that is, they are responsible for themselves and responsible for communicating with their parents. Now that the requirements of

this Act have been implemented, they serve a good purpose for the student. There have been a few problems created when parents of a student having difficulty wish to discuss the situation with University officials and cannot unless the student has signed a waiver.

Several University offices directly involved with student records such as Admissions, Registrar's Office and the Placement Office, had to establish new procedures at some additional cost. The Registrar's Office, for example estimated that it cost that office $6,000 to implement the type of record-keeping required by this Act, and in 1976-77 ongoing costs came to $2,000 in staff time and reporting procedures. The Placement Office estimated that implementation costs were $2,600, and compliance expenses in 1976-77 amounted to $1,500.

Although opinion was divided, the majority of the faculty contacted in this study indicated they felt the major impact of the Buckley Amendment has been a negative one because of the complications it causes with regard to letters of recommendations, whose value they felt has been eroded by the new rules of confidentiality. Most stated that they feel it does affect the quality of evaluation, and that in most instances letters are quite bland and do not offer truly candid opinions. The same objections were also voiced by those concerned with admissions, because they felt that this Act weakens the kind of material and information received on prospective students.

IV. RESEARCH FUNDING

It is important to recognize that research programs as currently operated in all areas of sciences, engineering and mathematics as well as most areas of psychology, sociology and economics, have been essentially dependent on the federal government for coherent funding and stability of faculty/graduate student/postdoctoral research programs for the past 25 years or more. Especially during the period of growth during the 1960's, federal funding became not only an unavoidable necessity but also an unimagined luxury for maintaining and developing research efforts. The current magnitude of such funding is reflected in figures reported in the National Science Foundation's Surveys of Science Resources which states that in fiscal 1975 more than $4.5 billion in grants and contracts was awarded to 2,517 colleges and universities.

Federal funding of research grants and contracts has made possible the maintenance of somewhat larger academic research facilities and staffs, including technicians and specialists, than would have been justified under teaching/education budgets. Further, the quality of persons kept in education has been significantly enhanced by the availability of research support and funding. The faculty member for whom external support can be obtained has often had available supplementary income for students, postdoctoral fellows or himself to relieve some of the pressures on the university budget for higher salaries since grant and contract funding can cover the research activities during summer months and

during periods when teaching.

In a report dated October 31, 1976 a Rice University committee studying research activity and productivity at this institution stated that "no university in this country has the internal resources to support research in the natural sciences or engineering on any significant scale. Such support comes primarily from federal funds...". "Without such external funds almost the only kind of research that we would perform would involve problems such as were studied fifty years ago before the advent of electronic and optical equipment on a significant scale." "Thus, if we are to have graduate programs in the sciences, external funds must be used to support the research component." In fiscal year 1976, Rice received $6.7 million from external sources for support of research activity, and of this amount $5.7 million was funded by federal research grants and contracts.

Since it is likely that the federal government will continue to be the principal sponsor of research, it is therefore axiomatic that the government will continue to be involved in the affairs of those institutions which accept funds for research purposes. The impact of federal funding of research as related to educational programs, fiscal accountability requirements, affirmative action, equal opportunity employment laws, etc., has been felt by all academic institutions involved in government sponsored research. Some aspects of Rice's research program have been affected by changes in government funding priorities, and some of the problems created by these changes, as well as

problems encountered in the reporting and documentation required for federal grants and contracts, are reviewed in some detail in the following pages.

A questionnaire seeking responses to specific questions about attitudes towards federally supported research activity at Rice and what effects it has had on the University was sent to 38 faculty and administrators. In addition, this subject was discussed in 25 personal interviews with faculty members, administrators and principal investigators.

A summary follows of the responses received to these questions which were mainly concerned with identifying the influence of programmatic legislation and priorities in government support on curriculum and research over the past five years.

Responses ranged from "much of departmental research dependent upon federal research support. Without it field research would cease and research efforts would have to be drastically redirected", or "graduate and postdoctoral research would disappear without federal funds", or "this department is 100 percent dependent upon federal funds for research", to a very few who indicated there was "no direct effect at all". Those questioned agreed that there had been little influence on curriculum; however, programmatic effects on research and effects of government established priorities have been significant (particularly NSF and the traineeship programs of NASA and NDEA). The increased difficulty in obtaining "training" grants, which now often carry "strings" (i.e. NIH service requirements), and the deep cuts in the

training grants and in fellowships supported by the government were given as examples of changes in government funding which have seriously affected the quality of graduate programs in the sciences. Not only has it affected the size of the programs but certain aspects of the quality of the programs have been affected.

The direction of the priorities of various federal funding agencies can have a very profound effect on the research conducted. The priorities of an agency, as reflected through its program director, influences what is funded and what is not and through discussions with these people, will in fact have some influence on what is proposed and what is not.

Cessation of funds for graduate students in the past several years has had an impact on the kind of research that they undertake for their dissertations. "The shift to policy from supporting training of students to one of support for only research will have effects that will be felt for many years to come." The level of funding and length of grants affect the financial stability of the research efforts in a department and can have some effect on the financial stability of the graduate student as well. Another example is that the funding priorities of the NSF on graduate students on research grants had a great effect. This lack of support gives the students fewer graduate courses and the faculty less opportunity to teach such courses, which are usually "current event" in the research speciality.

Some organizing or reorganizing of personnel to deal

with the loss of federal funds has been required the last several years, for instance, one department has successfully made the transition from the support of a major number of students from training grants to support in research grants. This however, necessitated a 50 percent decrease in the number of graduate students in that particular department. In another department, NASA had provided funds in the form of an area grant for 18 years. About a year ago NASA decided it was no longer interested in fundamental research in that field and is now phasing out this grant. This decision will no doubt affect the department's personnel policy as alternate sources of funding are being sought.

Certainly some courses and research projects have been developed to meet specific needs as established by legislation and government programs, and has already been mentioned, the availability of funds does in many cases set the limits on the kinds of research undertaken. Most of this has been done indirectly, however, such as the contents of certain courses changed as a result of the influence of government priorities. For instance, a greater emphasis on practical applications of fundamental principles in materials engineering than ever before, as well as environmental and energy considerations, being introduced in several courses.

In engineering the influence is most notably felt on research projects but here again it may be more of an indirect influence. Massive federal programs can significantly alter private industry (e.g. NASA, ERDA, etc.), modern engineering and education are directly influenced by industry needs.

In response to a question on how the lack of government support has affected the numbers or quality of the student body, most respondents felt that while reduced support has affected the numbers of students it has not necessarily affected the quality. It has sometimes affected or reduced opportunities for certain kinds of research. For instance, the Mathematics Department is very much supported by the NSF which has had very little influence on its activities with one exception described below. The department's curriculum and research are a direct function of what specific disciplines its faculty work in, but these are a function of the mathematicians available in the national market. Government funding does affect this. The one exception is that some five years ago NSF decided to cut back drastically support of graduate students in mathematics due to the problems in the national job market. This has been alleviated some in the last two years, but they have nowhere near the federal support for graduate students they once did (15 versus 45 at one time) when there was defense agency funding, NASA, etc which have now dried up. The department feels that "this is not altogether unhealthy as the graduate departments nationwide were producing too many Ph.D.'s" It also feels that twenty-five to thirty graduate students would be a good level to have optimal research conditions as well as a full-scale graduate curriculum, and that additional federal support here would be desirable to get to a higher level but not back to the original level of the sixties.

Although the research work being conducted at Rice can

be categorized as basic research, a concern repeatedly expressed by faculty in response to the questionnaires, as well as in the interviews, is the currently increased push by the government to keep research relevant which is having a very strong influence on the kind of work the faculty propose to do. The emphasis on energy and the vast sums available at ERDA are examples of this. This current shift toward increased support for problem solving as opposed to undirected basic research can change the direction of research. A clear example of governmental influence on academic research is in the field of metallurgy. The trend in the sixties was to support the development of metallurgy as a science and principal concerns at that time centered about fundamental research. This has given way more recently to the concept that applied research leading to the results for direct industrial use would be worthwhile. This thinking has clearly been adopted by governmental agencies sponsoring research in this field.

The question of applied versus fundamental research has in some ways also changed the manner in which funds are issued. Some agencies have gone strongly to contracts in place of grants, and contractural agreements involve a very directed kind of activity. The reduction in spending for basic research by military agencies, for example, has reduced the beneficial effects of plurality of sources of support. As expressed by one administrator, "The stabilizing effect of plurality is lost or reduced, yielding anxiety for researchers--faculty, students and post docs--and problems for the

University, i.e., interim support between grants".

Productive faculty who lose support because of agency shifts toward mission-oriented programs are demoralized, and graduate students are faced with ever more limited choices in research because of these funding problems.

While the question of increased government interest in funding "applied" research versus "basic" research was a source of concern to many of the faculty who were questioned, the main consideration expressed by most was that the faculty scholar should be motivated by his intellectual curiosity rather than by "let's do research in this area since it's being funded". In fact, in a report to the Provost dated October 31, 1976 concerned with increasing University research productivity and research income, the task force studying this problem stated that "the research best done is that which the faculty is enthusiastic to do. We cannot urge that the faculty involve itself in uninteresting research just because it is of a "correct" type or because it has funding possibilities. Only mediocre results could be expected which would ultimately harm Rice's image. Since applied research is by definition derivative from the results of basic research, the two types are complimentary and can both be viewed as appropriate to the University."

Of particular concern to those participating in federally sponsored research programs are the problems created by the lack of continuity of support as well as fluctuation in support because of changes in an agencies' funding priorities. For example, when NIH funding changed its focus and became

more disease-oriented, a department had to change from major funding from NIH to obtaining NSF research funds. The differences between the two agencies had a definite financial impact on the department since the typical NIH grant was $60,000 just in direct costs, while the typical NSF grant is around $28,000 including overhead. The period of support is also less (two years from NSF as opposed to three or more by the NIH). A major consequence of the general decrease in the amount of support available is the cutback in general research services that can be provided by the department, that is, shop facilities, electron microscopy, etc., since these services are provided in part by direct charges to grants and contracts. This places individual faculty members in a less competitive position for funds available so it is somewhat of a downward spiral.

In addition, short-term grants make planning difficult; most grants are for two years yet usually a graduate student is taken on for 3-4 years, and many times this requires a major shifting in funds as interim support must be obtained between grants. Too, the recent trend towards the awarding of more short-term contracts, sometimes of only one-year duration, can cause major problems. Often the length of time required to hire suitable personnel and purchase needed equipment make it virtually impossible to carry out the research for which the grant or contract is awarded. What would be desirable would be a firm funding commitment for a substantial period of time (3-5 years) and to learn of this commitment at least several months prior to the start of the

grant period.

Another area of concern among investigators and administrators is the lack of uniformity among government agencies in the administration of programs, and especially the lack of satndardization in reporting requirements and procedures. This can be very costly and time-consuming for the faculty and administrative staff involved in these activities.

In many cases the regulations are too cumbersome to be followed literally, and sometimes they actually represent a hindrance to conducting research and often result in antagonism between the principal investigators and administrative staff who are attempting to interpret and comply with these reporting regulations. Improvements in this area would include establishing a set of general guidelines which would give more discretion to the Principal Investigator on how to spend his research funds, while retaining specific regulations which might be needed to prevent any unethical spending.

Additionally there are problems caused by poor communication among interrelated government offices; for example, copies of reports sent to one "base office" for distribution to other offices fail to be forwarded to the latter. These other offices then request a copy of a particular report, generating extra necessary work. Further, if there is a problem with a grant, especially one sponsored by the larger agencies, it is very difficult to have it rectified. Correspondence with the agency is frustrating and ultimately the appropriate official has to be called before the problem is corrected and that action in most cases is very slow in

coming.

Although government regulations should exist for a satisfactory control of funds from sponsored programs, the establishment of a standardized form of reporting for all sponsoring agencies would result in a more efficient and expeditious way of administering government funds. The present system creates unnecessary duplications and places an expensive administrative burden on the recipient institutions.

One impact at Rice as a result of the growing federal compliance and reporting regulations required because of government sponsored research has been an increase in administrative procedures to comply with these regulations. For instance, the Accounting Office had to completely revamp the University's reporting procedures as a result of changes in the time-allocation reports. It is estimated that this one change took 650 man-hours to devise programs for the computer, and it takes at least 200 man-hours per month to maintain.

Departments with federally funded research have also experienced large increases in required paperwork and record-keeping primarily due to additional reporting requirements. For example, one department heavily involved in government research activity estimated that the addition of another secretary to the departmental office during the past year could be partially attributed to the increased secretarial workload generated by these rules. Stringent reporting and accounting requirements associated with federal grants and contracts have also necessitated a substantial increase in

both faculty and staff time spent on paperwork.

There are several offices at Rice directly involved with providing services to recipients of externally funded research. The Office of Advanced Studies and Research was established in 1972 in order to achieve a more efficient and effective administration of several activities, including the administration of external funding of graduate, post-doctoral and faculty research activity. This office has established standard procedures and forms for submitting proposals for sponsored programs. All grants and contracts between Rice University and the sponsoring agency are channelled through this office, and all externally sponsored research activity is monitored by it. In 1976, it is estimated that 50 percent of its staff's time at a cost of $60,000-$65,000 was spent on these activities.

Much of the equipment acquisition and inventory procedures have now been centralized as a result of government reporting reuqirements. The processing of purchase orders for the acquisition of equipment and keeping track of the inventory of this equipment is handled by the Property Administrator in the Campus Business Office. In fact, primarily as a result of government equipment inventory requirements, a computerized system was developed about six years ago so that all the University's equipment (some 11,000 items) are now inventoried and the preparation of quarterly equipment reports, reports required upon the termination of grants and contracts, or transfer of title information can be obtained from the computer. Most of the

problems with this system, however, results from poor communication between principal investigators and staff administrators and not as a result of any government reporting requirements.

During fiscal year 1976, $450,846 was spend on equipment purchases for research activity. Of this amount, $368,579 for research equipment expenditures came from grants or contracts with government agencies. Since Rice provides equipment funds to departments for undergraduate teaching purposes and the major portion of equipment obtained for research purposes is funded by external sources, it is obvious that this is a very tangible demonstration of how important government supported research is to this institution. Although some of the procurement procedures and inventory controls required for federally funded equipment can be time-consuming and burdensome, the benefits far outweigh any difficulties or inconveniences encountered.

The handling of the financial records for the grants and contracts is done by the research accountant and his secretary who devote 100 percent of their time to this activity. The cost of this in 1976 was approximately $48,660, and if government regulations and requirements resulting from them increase at the same rate of the last few years, it is estimated that additional administrative help will be needed in this area in the near future.

The enlargement of the staff in the Office of Advanced Studies and Research, the creation of the position of Property Administrator and the establishment of a computerized inven-

tory control system, and the office of the research accountant are all examples of administrative centralization which has occurred at Rice primarily as a result of obtaining federal research funds and the compliance and reporting requirements resulting from this externally funded research.

Opinions regarding this centralization range from "causes unnecessary delays, excessive paperwork and wasted time and money" to "compliance reporting requirements have served as a reason for expansion of the degree of centralization", to "centralization seems the most effective way to deal with governmental requests for information".

The substantial growth of the administrative apparatus at Rice during the last decade can, no doubt, be largely attributed to compliance and reporting requirements by the federal government. One way this is reflected, of course, is in the increasing overhead rate. In the 1960's Rice had nearly twice the total federal funding for research as it has today, yet this was accomplished with a more decentralized administration and a substantially smaller total administrative apparatus.

The following section briefly reviews the funding received by Rice from federal sources during the period 1964-76, and then summarizes the funding from these sources in 1976. Some of this material was included in the University's Self-Study Report prepared in 1973-74 to fulfill accreditation requirements of the Southern Association of Colleges and Schools.

Training, facilities, institutional and research grants increased rapidly until 1968 and funds increased 100 percent for research programs between 1964-67. However, "facilities (e.g., assistance in constructing the Math Sciences building, improvements in Chemistry and Space Science buildings, etc.) and training (e.g., NDSL) grants reached their maimum in 1968 and have been declining every since". "Despite the crisis caused by premature cancellation of the NSF Systems Grant, other institutional grants (e.g., HEW Public Health Science Grant) have kept this category reasonably constant since 1967". Table I shows funds received from federal sources during 1964-76 and clearly illustrates how the funding level varied during this period, increasing until 1968 and then declining until the last three years (1974, 1975, and 1976) where it has remained at essentially the same level. While income from research grants has remained fairly constant since 1967, funds for facilities, for instance have practically reached zero ($5,500 in 1976, see Table II) reflecting the cessation in 1974 of federal appropriations in this area.

Table II shows the number of active research, institutional, training and facilities grants in 1976 and details the expenditures in each of these areas. This support provided funds for faculty salaries, graduate stipends, equipment and other expenses as well as providing overhead costs (see the allocations in each of these categories in Table II). Of the $5,704,212 spent almost one-half of this amount or $2,487,601, was allocated for salaries and stipends. Approximately two-thirds of the 826 graduate students received some kind of financial support. Of this 35 percent was provided by the federal government, 38 percent by University funds, and 27 percent by foundations, corporations, and other private sources. Additionally of the 100 postdoctoral fellows and research associates at Rice 80 of them were supported entirely by government funded research grants and contracts. Over half of the funds in 1976 were provided by four federal agencies: Environmental Protection Agency, Energy Research Development Agency, Department of Defense, and the National Science Foundation.

As already noted, funds for research expenditures have remained fairly constant, and for the last three years have remained at almost the same level:

1974	$4.8
1975	$4.9
1976	$4.9

While the funding level has stayed the same during the last three years, however, inflation has devalued these funds by approximately 20 percent. 42

The typical grant size in the science and engineering

departments was about $35,000 while in the humanities it was in the $3,000-$4,000 range. Table III shows the distribution of existing grant/contract support of faculty by department in 1976.

For the fiscal year ending June 30, 1976 Rice University received $5,753,253 from government grants and contracts. Of this total, $4,454,716 was for direct costs and $1,298,519 was paid in overhead costs, which is determined on the basis of a certain percentage of salaries and stipends charged to the grants. The approved overhead rate currently charged by Rice on government grants and contracts is 58 percent.

Some 293 proposals were submitted by faculty members in the science, engineering and humanities divisions, and a total of 138 new grants and contracts were awarded. This $5.7 million represents 15.4 percent of the University's total revenue in 1976 and accounted for almost 16.1 percent of total University expenditures.

Table I

SOURCES OF REVENUE FOR OPERATIONAL BUDGET

FROM FEDERAL FUNDS

Revenue Source	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
Funds from federal programs	2.7	3.4	5.4	7.3	8.6	7.6	7.1	6.5	6.1	6.7	5.7	5.7	5.7

Table II

WILLIAM MARSH RICE UNIVERSITY

RESEARCH, INSTITUTIONAL, TRAINING, AND FACILITIES CONTRACTS AND GRANTS
STATEMENT OF EXPENDITURES
FOR THE YEAR ENDED JUNE 30, 1976

	Number of Contracts	Salaries and Stipends	Equipment	Other Expenses	Payroll Benefits	Overhead	Cost of Education Allowance	Total
RESEARCH:								
Environmental Protection Agency, Energy Research Development Agency, and Department of Defense	61	$ 537,548	$ 57,000	$ 460,198	$ 50,215	$ 264,529	-	$1,369,490
N.A.S.A.	22	393,310	50,367	272,790	40,760	205,016	-	962,243
National Endowment for the Arts	4	4,300	-	21,002	67	381	-	25,750
National Science Foundation	130	727,438	189,823	361,784	61,726	374,762	-	1,715,533
Public Health Service	36	405,675	39,927	213,553	41,269	204,099	-	904,523
	253	$2,068,271	$ 337,117	$1,329,327	$194,037	$1,048,787		$4,977,539
INSTITUTIONAL:								
National Science Foundation	23	443	6,575	13,286	-	-	-	20,304
Public Health Service	15	-	13,025	15,320	-	-	-	28,345
	38	$ 443	$ 19,600	$ 28,606	$	$		$ 48,649
TRAINING:								
Environmental Protection Agency	2	33,850	-	29,112	876	4,123	-	67,961
Department of Defense	1	-	-	216	-	-	-	216
National Science Foundation	10	28,530	-	19,168	68	-	5,207	52,973
Public Health Service	29	356,507	6,362	166,158	17	5,435	16,895	551,374
	42	$ 418,887	$ 6,362	$ 214,654	$ 961	$ 9,558	$ 22,102	$ 672,524
FACILITIES:								
National Science Foundation	1	-	5,500	-	-	-	-	5,500
	1		$ 5,500					$ 5,500
Totals--1976	334	$2,487,601	$ 368,579	$1,572,587	$194,998	$1,058,345	$ 22,102	$5,704,212

TABLE III

DISTRIBUTION OF EXTERNAL GRANT
AND CONTRACT SUPPORT
AMONG FACULTY
1976

Department	Number of Grants/Contracts
Accounting	0
Anthropology	3
Architecture	3
Biochemistry	8
Biology	10
Chemical Engineering	7
Chemistry	18
Civil Engineering	2
Economics	2
Education	0
Electrical Engineering	13
English	1
Environmental Science Engr.	2
Fine Arts	4
French/Italian	0
Geology	9
German/Russian	0
History	4
Institute of Computer Science	1
Library	1
Math	12
Math Science	6
Mechanical Engineering and Materials Science	10
Music	1
Philosophy	0
Psychology	0
Physics	10
Political Science	0
Religious Studies	0
Sociology	1
Space Physics and Astronomy	17
Spanish/Portuguese/Classics	0
Total	145

As this report has indicated some rather serious funding problems have been created at times at Rice due to a change in an agencies' funding priorities, lack of continuity of support, or great fluctuation in amount of support, but it is also perfectly clear that without such support Rice University would not be the same kind of institution. Research efforts at Rice are an important part of the graduate educational program, and government funds make it possible to support strong graduate programs and at the same time provide indirect support for the undergraduate program. In addition, without these external funds supporting programs of research the quality of our faculty could not be retained and the consequences of that would make Rice a very different place.

While it is agreed that there should be fiscal accountability for funds supplied by government agencies, there is concern about the increase in excessive, time-consuming and costly reporting requirements being placed on academic institutions as a result of the acceptance of these federal funds. This is a particular burden to the small independent colleges and universities like Rice, which have neither the staff nor resources available to handle the growing burden of paperwork.

SUMMARY

Rice University has not had to alter its institutioanl priorities or its commitment to academic excellence as a result of any federal legislation. Indeed the benefits it has realized as a result of federally sponsored programs have been and continue to be significant, and in the area of research funding, essential. Some University procedures and administrative changes have occurred in the last decade as a result of involvement with the federal government, and many of these have been beneficial; for example, the establishment of a more organized equipment inventory system and mo·e efficient employment methods.

Certainly Rice acknowledges its responsibility to provide accountability for the use of federal funds, and it is committed to a policy of nondiscrimination. What is becoming more apparent, however, is the growing burden of compliance with federal regulations. Of particular importance is the increase in man-hours required to implement and administrate federal regulations because of: regulations which were developed with little, if any, understanding of educational institutions, ambiguous guidelines, conflicting interpretations of regulations by government agencies, requests for complex and unnecessary data, unrealistic timing of reports, etc.

A conservative estimate is that in 1976-77 it cost Rice $400,000 in time, money and effort to administer federal funds and to comply with federal legislation. Such costs

are of growing concern, especially to private institutions, whose resources are limited. An increasing financial burden to meet federal requirements will greatly diminish their ability to function, and as regulations continue to proliferate, the implication of this increased regulation becomes more fearful than any negative effect of current regulations.

APPENDIX

RICE UNIVERSITY

Vice President for External Affairs

MEMORANDUM

TO: Administrative Officials, Department Chairmen and Selected Faculty

DATE: July 22, 1977

FROM: W. W. Akers

RE: Sloan Study on Government and Higher Education

In the last few years academic institutions have become increasingly concerned about the growing public supervision by the government of what was formerly private responsibility. Government legislation and regulations now affect a wide range of university activities such as faculty and staff recruitment, sponsored research, and student financial aid.

Rice is one of 22 academic institutions invited to participate in a self-study sponsored by the Alfred P. Sloan Foundation on the impact of federal regulations on higher education. Our report will be submitted to the newly-created Sloan Commission on Higher Education and the Federal Government which during the next several years will study future applications and problems with government regulations and their influence on educational activities. Although it is not possible to gauge the final effect of the Commission's report, it is hoped that it will result in some practical changes such as the rationalization of the system and the simplification of regulations.

A list of federal statutes, executive orders and regulations which directly affect higher education is attached. Would you please review this list and complete the enclosed questionnaires regarding these regulations and their impact on Rice University.

Please make your responses as candid and as complete as possible. The identification of respondents is for our use only for follow-up purposes. All replies will be treated as confidential and no one will be quoted in the report.

Please direct any inquiries you might have regarding this study or the survey form to Linda Bramlett at extension 2522 or Bruce Marcus, extension 2533. Please return these forms in the enclosed envelope by August 12, 1977 if possible.

Thank you for assisting us in this study.

WWA:mlw
Enclosures

ALL UNIVERSITY DIVISIONS

Title VII, Civil Rights Act of 1964

Title VI, Civil Rights Act of 1964

Executive Order 11246

Title IX, Education Amendments 1972

Equal Pay Act of 1963

Age Discrimination in Employment Act of 1967

Civil Rights Act of 1866

Civil Rights Act of 1871

Civil Rights Act of 1874

Rehabilitation Act of 1973

Social Security Act

Employee Retirement Income Security Act of 1974

Occupational Safety & Health Act of 1970

Internal Revenue Service Procedure 75-50

Vietnam Era Veteran Re-adjustment Act

Regulations for Research on Human Subjects

Private Civil Rights Claims & Precedents

REGISTRAR

Buckley Amendment (Family Educational Rights & Privacy Act of 1974)

38 U.S.C. 34 (Veterans Educational Program)

Higher Education General Information Survey

Selective Service Registration Status

Census Data

SPONSORED PROGRAMS

45 CFR 74 (Cost Reimbursement)

Patent Reports

Publication of Research Reports

Contract Performance

ACADEMIC DEPARTMENTS

Institutional Eligibility Regulations

38 U.S.C. 34 (Veterans Educational Programs)

Immigration & Naturalization Act of 1891 (Foreign Students-Faculty)

Intergovernmental Personnel Act of 1970

Collective Bargaining Agreements

Tuition Rates & Wages

TREASURER

Internal Revenue Service (Tax-exempt)

Internal Revenue Service (Deductible Contributions)

Tax Reform Act of 1976

DEVELOPMENT OFFICE

Internal 170 (Deductible Contributions)

Tax Reform Act of 1976

PERSONNEL

Davis-Bacon Act (Wage & Hour)

Service Contract Act

Fair Labor Standards Act

Intergovernmental Personnel Act of 1970

Collective Bargaining Agreements

Comprehensive Employment & Training Act of 1973

Tuition Rates & Wages

Census Data

FINANCIAL AID

Veterans Assistance Service Act of 1974

Educational Opportunity Grants, Insured Loans

RESEARCH & DEVELOPMENT

Patent Reports

LIBRARY

Higher Education General Information Survey

COMPTROLLER

Higher Education General Information Survey

Credit Unions

Pension Liability Insurance

STUDENT AFFAIRS

Higher Education General Information Survey

Instructional Television, Campus Radio Stations

ADMISSIONS

Immigration & Naturalization Act of 1891

Federal Trade Commission Act of 1914

PUBLIC RELATIONS

Federal Trade Commission Act of 1914 (Regulations on Advertising, Tuition Refunds & Graduates Placement)

ALUMNI ASSOCIATION

Federal Trade Commission Act of 1914 -(Same as above)

PHYSICAL PLANT

Historical Preservation Act of 1966

Hazardous Substances, Transportation, Emission (Biological, Radiological, Chemical etc.

Energy Conservation

Fallout Shelters

Architectural Barrier Act of 1968

SCIENCE LABORATORIES

Hazardous Substances

Use of Surplus Property

MEDICAL LABORATORIES

Annual Welfare Act of 1972

Hazardous Substances

MEDICAL DEPARTMENTS

Comprehensive Health Manpower & Nurse Training

Public Health Services Act of 1971

Health Professions Education Assistance Act of 1976

OCEANOGRAPHY & MARINE SCIENCE

Marine Apparatus Inspection & Registration

MAIL DEPARTMENT

Non-profit & 4th Class Usage

AGRICULTURAL DEPARTMENTS

Not Applicable

AVIATION PROGRAMS

Air Force ROTC - Not Applicable

SLOAN STUDY ON FEDERAL GOVERNMENT AND HIGHER EDUCATION

Office of External Affairs - 314 Allen Center

Government Funded Research

Can you identify the influence of programmatic legislation and priorities in government support on curriculum and/or research in your department over the past five years? (For our purposes, programmatic legislation is that legislation which may be directly or indirectly related to higher education and provides support for research or education programs, e.g., National Science Foundation, National Institute for Education, National Endowment for Humanities and Fund for the Improvement of Post Secondary Education.)

Name: _____

Position:

How would you assess or project the impact of government policies or funding priorities on the administration/faculty/students of your department?

Have you organized, reorganized or accumulated personnel or other resources to use -- or deal with the loss of -- federal funds? Government fellowships or training monies? Please specify.

Have you developed courses, specializations or research projects to meet needs articulated through legislation and government programs?

Has the presence or absence of direct government support of students in your field affected numbers or quality of student body? Direct or indirect opportunities for students to participate in research? Please specify.

How would you identify/assess the time/attention paid by your department to monitoring or pursuing government funding or future priorities?

How would you assess the impact of government procurement practices on your department, e.g., length of commitment in funding projects, timing of awards and arranging departmental commitment without firm decisions on awards, solicitations through requests for proposals without firm commitment to funding? Please specify.

SLOAN STUDY ON FEDERAL GOVERNMENT AND HIGHER EDUCATION

Office of External Affairs - 314 Allen Center

In your opinion, under what circumstances do you think government involvement and regulation is needed, unwarranted or should not be applicable to educational institutions:

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Name: _____

Position: _____

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How would you evaluate the quality of regulations and government personnel who write and enforce these regulations?

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What communication difficulties or administrative problems have you encountered as a result of compliance with Federal regulations?

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To what extent do you think administrative centralization has occurred at Rice as a result of compliance/reporting requirements? Please assess the impact of such centralization:

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Office of External Affairs - 314 Allen Center

In the past ten years has your office or offices/departments within your governance had to change or reorganize administrative procedures in order to comply with federal regulations. Please identify and provide an estimate of the man-hours and/or costs that this reorganization required: (additional personnel required, maintenance of additional records, assignment of additional space, equipment purchased and additional computer programming)

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Office of External Affairs - 314 Allen Center

Identify those areas of University activities which, in your opinion, have been most affected in the last decade by government legislation or regulations (for e g - Affirmative Action, Buckley Amendment, OSHA, Title IX, Rehabilitation Act of 1973) and assess their impact (negative and positive) on this university:

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Has the diversity of research funding declined during the last decade? If the answer is yes, what impact has this had on faculty research activity, curricula, etc?

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What effect, if any, has the increased availability of federal student aid had on the composition of the Rice student body? (For e g - has it increased the nationalization of the students?)

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Please feel free to write any comments concerning federal regulations dealing with Rice and/or higher education:

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FEDERAL GOVERNMENT PROGRAM OR REGULATION: _____ Name: _____

Position: _____

n Your Opinion:

Do you feel that this regulation was written in a clear and concise fashion? ____

Do the requirements of this program or regulation change frequently? ____

If yes; Does this hinder your ability to comply? ____

How?

Do the compliance requirements and procedures help to attain, or detract from the goals and legislative intent of this program or regulation? _____

2. Please give an estimate of the total monies spent in order to begin compliance with this program or regulation. We are looking for a cost that was initially incurred and not a cost that has been extended over the period since this program or regulation was put into effect*:

$____

For the fiscal year 1976-77, please give us an estimate of funds used in the compliance effort by your area or department*: $____

For the fiscal year 1976-77, please estimate the percent of work time spent on compliance with this program or regulation:

Yourself	Secretary and/or Staff
%	%

ow many people are included in your "Secretary and/or Staff" response? ____

ow many of your staff members were hired specifically to deal with this program or regulation? ____

4. For the fiscal year 1976-77, please estimate the percent of compliance time spent on the following:

	Yourself	Secretary and/or Staff
Paperwork:	%	%
Meetings:	%	%
Proposals:	%	%
Other:	%	%
	%	%
Total:	100%	100%

5. In Your Opinion:

What percent of the required reporting is:

Necessary and useful: ____%

Meaningless: ____%

A repetition of what is required by other federal and state agencies: ____%

Totally understandable: ____%

Ever looked at by the requesting agency: ____%

* These costs should include mailings, computer time, equipment, staff time, additional staff time and any other similar expense.

7/19/77 - Sloan Study

FEDERAL GOVERNMENT FORMS, REPORTS AND QUESTIONNAIRES:

Name: _____

Position: _____

1. _____ Requesting Agency: _____

For FY1976-77, please estimate the amount of work time spent in filling out this form:

Yourself: ___ hr. Staff: ___ hr. Secretary: ___ hr.

For FY1976-77, please estimate the amount of time spent in filling out all forms:

Yourself: ___ hr. Staff: ___ hr. Secretary: ___ hr.

Do the requirements of this report frequently change? _____

Is this a problem? _____

Please give us an estimate of the total monies spent in the effort to comply and fill out this form: *

FY1976-77: $_____

Please indicate if there was an initial cost incurred, that has not been carried over the years since this form was first required: * $_____

In Your Opinion:

What percent of the required reporting is:

Necessary and useful: ___%

Meaningless: ___%

A repetition of what is required by other federal and state agencies: ___%

Ever looked at by the requesting agency: ___%

Do you feel that this form was written in a clear and concise fashion? _____

Are the questions asked relevant to the intent of this form? _____

How many times per year is this form submitted? _____

* These costs should include computer time, supplies, staff time and any similar expense.

2. _____ Requesting Agency: _____

For FY1976-77, please estimate the amount of work time spent in filling out this form:

Yourself: ___ hr. Staff: ___ hr. Secretary: ___ hr.

Do the requirements of this report frequently change? _____

Is this a problem? _____

Please give us an estimate of the total monies spent in the effort to comply and fill out this form:

FY1976-77: $_____

Please indicate if there was an initial cost incurred, that has not been carried over the years since this form was first required: $_____

In Your Opinion:

What percent of the required reporting is:

Necessary and useful: ___%

Meaningless: ___%

A repetition of what is required by other federal and state agencies: ___%

Ever looked at by the requesting agency: ___%

Do you feel that this form was written in a clear and concise fashion? _____

Are the questions asked relevant to the intent of this form? _____

How many times per year is this form submitted? _____

3. _____ Requesting Agency: _____

For FY1976-77, please estimate the amount of work time spent in filling out this form:

Yourself: ___ hr. Staff: ___ hr. Secretary: ___ hr.

Do the requirements of this report frequently change? _____

Is this a problem? _____

Please give us an estimate of the total monies spent in the effort to comply and fill out this form:

FY1976-77: $_____

Please indicate if there was an initial cost incurred, that has not been carried over the years since this report was first required: $_____

In Your Opinion:

What percent of the required reporting is:

Necessary and useful: ___%

Meaningless: ___%

A repetition of what is required by other federal and state agencies: ___%

Ever looked at by the requesting agency: ___%

Do you feel that this form was written in a clear and concise fashion? _____

Are the questions asked relevant to the intent of this form? _____

How many times per year is this form submitted? _____

7/19/77 - Sloan Study